COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, VA 22313-1450

Express Mail No.: EL649158779US Date of Deposit: 07 October 2003

10/680540 10/680540

Sir:

Transmitted herewith for filing is the patent application of

Inventor(s):

Christopher J. ZIOLKOWSKI et al.

For: LONG RANGE DATA TRANSMITTER FOR HORIZONTAL DIRECTIONAL DRILLING

Enclosed are:

- Fifteen (15) pages of specification, six (6) pages of claims (Claims 1-18), one (1) page of Abstract, and four (4) sheets of drawings (Figs. 1-4).
- Executed combined Oath or Declaration, Power of Attorney and Petition.
- ☐ Certificate of Mailing by Express Mail.
- A verified statement to establish small entity status under 37 CFR 1.9 and 37 CFR 1.27.
- Recordation Form Cover Sheet, in duplicate, together with executed Assignment Document.
- Information Disclosure Statement, together with Form PTO-1449 (1 page) and with a copy of each and every cited reference.
- □ Return Receipt Postcard.

The filing fee has been calculated as shown below:

	COL. 1		COL. 2 SMALL ENTIT		ENTITY	LARGE ENTITY		
FOR:	NO. FILED		NO. EXTRA	RATE	FEE	OR	RATE	FEE
BASIC FEE					\$385	OR		\$770
TOTAL CLAIMS	18	less 20	0	X 09 =	0	OR	X 18 =	
INDEPENDENT CLAIMS	4	less 3	1	X 43 =	43	OR	X 86 =	
MULTIPLE DEPENDENT CLAIMS PRESENTED				+145 =		OR	+290 =	
* IF THE DIFFERENCE IN COL. 1 IS LESS THAN ZERO, ENTER "0" IN COL. 2				TOTAL	428	OR	TOTAL	

- Please charge my Account No. 502045 in the amount of (\$428.00). A duplicate copy of this sheet is enclosed.
- The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 502045. A duplicate copy of this sheet is enclosed.
 - Any additional filing fees required under 37 CFR 1.16.
 - Any patent application processing fees under 37 CFR 1.17.

Gas Technology Institute 1700 South Mount Prospect Road Des Plaines, Illinois 60018 Phone (847) 768-0832 Fax (847) 768-0802

Mark E. Fejer

Registration No. 34,817

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:

Christopher J. ZIOLKOWSKI

Maximillian J. KIEBA

Title:

LONG RANGE DATA TRANSMITTER FOR

HORIZONTAL DIRECTIONAL DRILLING

Express Mail No.: EL649158779US

Date of Deposit:

07 October 2003

CERTIFICATE OF MAILING BY EXPRESS MAIL

Mail Stop PATENT APPLICATION

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

I hereby certify that the subject patent application is being deposited with the United States Postal Service as Express Mail Post Office to Addressee No. EL649158779US, on 07 October 2003, and is addressed to Mail Stop PATENT APPLICATION, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, together with the items listed below.

- Transmittal Letter, in duplicate
- Fifteen (15) pages of specification, six (6) pages of claims (Claims 1-18), one (1) page of Abstract, and four (4) sheets of drawings (Figs. 1-4)

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 with executed Assignment Document
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Respectfully submitted,

Mark E. Fejer

Regis. No. 34,817

Gas Technology Institute 1700 South Mount Prospect Road Des Plaines, Illinois 60018 TEL (847) 768-0832; FAX (847) 768-0802